

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 41 (cancelled).

Claim 42 (new): A file recording device comprising:

at least one processor;

at least one recording device; and

at least one memory device configured to store: (i) a file of a predetermined format, and (ii) a plurality of instructions, which when executed by the at least one processor, cause the at least one processor to operate with the at least one recording device to:

- (a) manage an actual data block of the file, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) manage a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and

- (c) record the at least one program stream to the at least one memory device based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 43 (new): The file recording device of Claim 42, wherein the management information block includes extended data associated with the video stream reproducing section, the audio stream reproducing section and the program stream reproducing section.

Claim 44 (new): The file recording device of Claim 43, wherein the program stream reproducing section includes a system information entry relating to basic information and a system auxiliary information entry relating to auxiliary information.

Claim 45 (new): The file recording device of Claim 42, wherein the program stream reproducing section includes identification information which indicates whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 46 (new): The file recording device of Claim 42, wherein, for each of a plurality of actual data blocks, the priority information indicates the priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream corresponding to said actual data block at the time of reproducing or recording said at least one program stream.

Claim 47 (new): The file recording device of Claim 42, wherein the actual data block includes control information to control each stream multiplexed in the at least one program stream, and wherein the management information of the management information block is arranged based on the control information.

Claim 48 (new): The file recording device of Claim 47, wherein the control information is information associated with either output or non-output of reproduction regarding each respective stream multiplexed in the at least one program stream.

Claim 49 (new): A file reproducing device comprising:

at least one processor;

at least one reproducing device; and

at least one memory device configured to store: (i) a file of a predetermined format, and (ii) a plurality of instructions, which when executed by the at least one processor, cause the at least one processor to operate with the at least one reproducing device to:

- (a) manage an actual data block of the file, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) manage a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) reproduce the at least one program stream from the file of the predetermined format based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 50 (new): The file reproducing device of Claim 49, wherein when executed by the at least one processor, the plurality of instructions cause the at least one processor to operate with the at least one recording device to determine whether the file will be difficult to reproduce based on the information to reproduce the at least one program stream stored in the program stream reproducing section.

Claim 51 (new): The file reproducing device of Claim 50, wherein the determination whether the file will be difficult to reproduce is based on identification information stored by the program stream reproducing section, the identification information indicating whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 52 (new): The file reproducing device of Claim 49, wherein the program stream reproducing section includes identification information which indicates whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 53 (new): The file reproducing device of Claim 49, wherein, for each of a plurality of actual data blocks, the priority information indicates the priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream corresponding to said actual data block at the time of reproducing or recording said at least one program stream.

Claim 54 (new): The file reproducing device of Claim 49, wherein the actual data block includes control information to control each stream multiplexed in the at least one program stream, and wherein the management information of the management information block is arranged based on the control information.

Claim 55 (new): The file reproducing device of Claim 54, wherein the control information is information associated with either output or non-output of reproduction regarding each respective stream multiplexed in the at least one program stream.

Claim 56 (new): A file editing device comprising:

- at least one processor;
- at least one reproducing device; and
- at least one memory device configured to store: (i) a file of a predetermined format, and (ii) a plurality of instructions, which when executed by the at least one processor, cause the at least one processor to operate with the at least one reproducing device to:
- (a) manage an actual data block of the file, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) manage a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store editing information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream,
- (c) determine whether to edit the at least one program stream based on the editing information, and
- (d) if the determination is to edit the at least one program stream:
 - (i) reproduce the at least one program stream from the file, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream,

and

- (ii) edit the reproduced program stream.

Claim 57 (new): The file editing device of Claim 56, wherein the determination whether to edit the at least one program stream is based on the editing information and the information to reproduce the at least one program stream stored by the program stream reproducing section.

Claim 58 (new): The file editing device of Claim 56, wherein the program stream reproducing section includes identification information which indicates whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 59 (new): The file editing device of Claim 56, wherein the determination whether to edit the at least one program stream is based on identification information stored by the program stream reproducing section, the identification information indicating whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 60 (new): The file editing device of Claim 59, wherein the actual data block includes control information to control each stream multiplexed in the at least one program stream, wherein the control information is associated with either output or non-output of reproduction regarding each respective stream multiplexed in the at least one program stream, and wherein the management information of the management information block is arranged based on the control information.

Claim 61 (new): A file recording method comprising:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) recording the at least one program stream to at least one memory device based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 62 (new): The file recording method of Claim 61, which includes associating identification information with the program stream reproducing section, the identification information indicating whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 63 (new): The file recording method of Claim 61, which includes associating control information with the actual data block, the control information associated with control of each stream multiplexed in the at least one program stream, and arranging the management information of the management information block based on the control information.

Claim 64 (new): A file reproducing method comprising:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) reproducing the at least one program stream from the file of the predetermined format based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 65 (new): The file reproducing method of Claim 64, which includes associating identification information with the program stream reproducing section, the identification information indicating whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 66 (new): The file reproducing method of Claim 64, which includes associating control information with the actual data block, the control information associated with control of each stream multiplexed in the at least one program stream, and arranging the management information of the management information block based on the control information.

Claim 67 (new): A file editing method comprising:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store editing information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream,
- (c) determining whether to edit the at least one program stream based on the editing information, and
- (d) if the determination is to edit the at least one program stream:
 - (i) reproducing the at least one program stream from the file, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream, and
 - (ii) editing the reproduced program stream.

Claim 68 (new): The file editing method of Claim 67, which includes associating identification information with the program stream reproducing section, the identification information indicating whether said video data multiplexed into the at least one program stream has been subjected to encoding processing with: (i) closed group of pictures, or (ii) open group of pictures.

Claim 69 (new): The file editing method of Claim 67, which includes associating control information with the actual data block, the control information associated with control of each stream multiplexed in the at least one program stream, and arranging the management information of the management information block based on the control information.

Claim 70 (new): A program on a computer readable medium regarding a file recording method, the program storing a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one recording device by:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) recording the at least one program stream to the computer readable medium based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 71 (new): A program on a computer readable medium regarding a file reproducing method, the program storing a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one reproducing device by:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) reproducing the at least one program stream from the file of the predetermined format based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 72 (new): A program on a computer readable medium regarding a file editing method, the program storing a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one reproducing device by:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store editing information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream,
- (c) determining whether to edit the at least one program stream based on the editing information, and
- (d) if the determination is to edit the at least one program stream:
 - (i) reproducing the at least one program stream from the file, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream, and
 - (ii) editing the reproduced program stream.

Claim 73 (new): A computer readable medium comprising:

a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one recording device by:

- (a) managing an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) recording the at least one program stream as the file of the predetermined format based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 74 (new): A computer readable medium comprising:

a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one reproducing device by:

- (a) managing an actual data block a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) reproducing the at least one program stream from the file of the predetermined format based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.

Claim 75 (new): A computer readable medium comprising:

a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one reproducing device by:

- (a) manage an actual data block of a file of a predetermined format, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) manage a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store editing information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream,
- (c) determine whether to edit the at least one program stream based on the editing information, and
- (d) if the determination is to edit the at least one program stream:
 - (i) reproduce the at least one program stream from the file, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream, and
 - (ii) edit the reproduced program stream.

Claim 76 (new): A recording medium having a file with a predetermined format recorded thereon, the recording medium comprising:

a plurality of instructions, which when executed by at least one processor, cause the at least one processor to operate with at least one recording device by:

- (a) managing an actual data block of the file, the actual data block including:
 - (i) at least one video stream including video data,
 - (ii) at least one audio stream including audio data, and
 - (iii) at least one program stream including the at least one video stream and the at least one audio stream multiplexed together,
- (b) managing a management information block of the file, the management information block including management information arranged in a hierarchical structure, the management information including:
 - (i) a video stream reproducing section configured to store information to reproduce the at least one video stream,
 - (ii) an audio stream reproducing section configured to store information to reproduce the at least one audio stream,
 - (iii) a program stream reproducing section configured to store information to reproduce the at least one program stream,
 - (iv) a non-destructive editing section configured to store information to enable non-destructive editing of the at least one program stream, and
 - (v) a priority section configured to store priority information indicating a priority of the at least one video stream and the at least one audio stream multiplexed in the at least one program stream, and
- (c) recording the at least one program stream to the file of the predetermined format based on the priority information, wherein the at least one video stream is reproducible from the file independent of the at least one program stream, and wherein the at least one audio stream is reproducible from the file independent of the at least one program stream.